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concluded*

18. (Amended) The projector according to claim 1, comprising an insulation coating film applied to the inner case in facing relation to said light source.

REMARKS

Careful consideration has been given to the Official Action of May 10, 2002 and reconsideration of the application as amended is respectfully requested.

The Examiner has raised a number of objections to the disclosure and each of the objections will be discussed hereafter with reference to the paragraph numbers in the Official Action.

1. The Examiner has objected to the drawings for failing to show the insulating sheet between the inner case 900 and the lower case 4 as recited in claim 4. In order to illustrate the insulating sheet it is proposed to amend Fig. 12 to show the sheet between the case 900 and the lower case 4. A print marked in red is submitted for the Examiner's consideration.

2. It is proposed to amend Fig. 3 to move numeral 9 and connect it by bracketing to blocks 9A, 9B, and 9C thereof.

3. It is proposed to amend Fig. 2 to apply an arrow head to numeral 8 designating the entire lamp unit and to add reference numeral 800 to designate the housing of the unit 8.

4. The Examiner finds the specification to be difficult to follow by frequent reference between figures therein. Amendatory action has been taken to minimize reference to different figures of the drawing when describing particular elements. However, it is conventional practice when referring to a detail to refer to a different figure from that which is being described. This is now minimized and it is believed that the Examiner's objection is overcome.

6. The objection to claim 9 has been overcome by referring to the resilient member as resilient clips 7 referred to on page 9, line 7.

7. Claim 17 has been amended to clearly define the housing that holds the light source, thereby overcoming the objection of the Examiner.

9. The term "near" in claims 8 and 13 has been deleted thereby overcoming the objection of the Examiner.

10. The term "opposite" in claim 18 has been removed in favor of more specific relationships between the claimed parts.

12. The rejection of claims 1-3, 6-11, 13, 14, 16, 19 and 20 under 35 U.S.C. § 102 as being anticipated by Furuhashi is overcome by the amendatory action which has been taken in the claims. Specifically, claim 1 has been amended to clarify the construction of the inner case and its relation with one of the outer cases to accommodate the color beam splitting optical system. This includes the incorporation into claim 1 of the subject matter of claim 2.

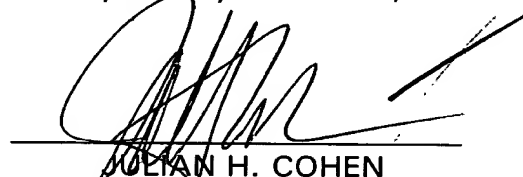
Furuhashi, as well as the other references cited by the Examiner fail to disclose the construction in which the optical system of the projector is

surrounded by an inner case having an opening provided on one side thereof and an outer case of the projector. The Examiner's attention is courteously invited to page 12 last paragraph to page 13 second paragraph of the specification in this respect.

The remaining claims have been rejected under 35 U.S.C. § 103 on Furuhata in view of secondary references none of which have applicability to the distinctions as set forth hereinabove with respect to Furuhata. Accordingly, the rejection of the additional claims under 35 U.S.C. § 103 is not deemed applicable.

Favorable reconsideration of the application is therefore earnestly solicited.

Respectfully submitted,



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Page 7, amend paragraph 10 as follows:

Fig. 12 is a conceptual view illustrating the layout of [a] an inner case and a light source lamp unit.

Page 8, amend paragraph 3 as follows:

Main components of the projector 1 are accommodated in outer cases 2 forming a housing of the projector.

Amend paragraph bridging pages 9 and 10 as follows:

Referring to Fig. 2, [on] exposed at the bottom of the lower case 4[, exposed] is [the base bottom of the] a base of a housing 800 of [constituting] a light source lamp unit 8 [(see Fig. 3 and 11)] which is accommodated inside the outer cases 2. By unscrewing a screw 27 for fixing the lower case 4 to the housing 800 and then by pulling out the base of the housing, the light source lamp unit 8 is drawn out from the lower case 4. In addition, there are provided feet 31R, 31L on the corners of the bottom front side of the lower case 4, while a foot 31C is provided at the center of the rear side. Incidentally, the feet 31R, 31L are designed to be advanced or retracted in the direction of protrusion b rotating their dials or by the operation of levers 32R, 32L, and the amount of advancement or retraction can be adjusted to change the height and angle of a displayed image.

Page 12, amend paragraph 3 as follows:

The light source lamp unit 8 constitutes the light source portion of the projector 1 and is provided with the light source device 183 comprising a light source lamp 181 and a concave mirror 182, and [a] the housing 800 [(see Fig. 11)] for supporting the light source device 183, as shown in Fig. 8. The light source lamp unit 8 configured as such is covered with an accommodating portion 9001 and is adapted to be removed from the projector 1 by unscrewing the screw 27 on the [aforementioned] bottom of case 4. The accommodating portion 9001 is formed into a unitary body with [the] an inner case 900 to be described later. In addition, as shown in Fig. 3, in front of the accommodating portion 9001 and at the position corresponding to the air outlet 160, there is arranged a main exhaust fan 16 that is larger than the auxiliary air exhaust fan 15. The main exhaust fan 16 is also driven by the power supplied by the second power supply block 98.

Amend paragraph bridging pages 12 and 13 as follows:

The optical unit 10 optically processes light emitted from the light source lamp unit 8 to form an optical image corresponding to image information and is mounted on [a] the inner case 900 formed as an integrated box-shaped body with an opening provided on one side thereof as shown in Fig. 4. The inner case 900 serves as a housing for mounting in place each optical component that constitutes the optical system and is formed of a resin or metal (Mg, Al, or an alloy of them). The inner case 900 accommodates components such as an

illuminating optical system 923, a color beam splitting optical system 924, a relay optical system 927, and a cross dichroic prism 910 to which the electro-optical device 925 or liquid crystal panels 925R, 925G, 925B are fixed. The inner case 900 further comprises a vertical head plate 9002 adjacent to the light transmission side of the cross dichroic prism 910 and the projection lens 6 is fixed thereon.

Amend paragraph bridging pages 19 and 20 as follows:

The inner case 900 to which the optical components have been attached as described above is inverted, and then the inner case 900 and the lower case 4 are fixed with screws 700 by making use of projected pieces 9005 provided on the inner case 900 and the screw holes of boss portions 4005 formed on the lower case 4 in a manner such that the optical components constituting the optical system are accommodated between the inner case 900 and the lower case 4 (see Fig. 5). [In this case, conduction] Conduction of the heat generated in [an] the optical system to the lower case 4 can be reduced, by inserting a heat insulating sheet 4.1 or the like between the inner case 900 and the lower case 4.

Amend paragraph bridging pages 23 and 24 as follows:

Fig. 10 is a partial perspective view illustrating the vicinity of a cross dichroic prism of an optical system according to another embodiment of the present invention. [A] An inner case 902 to be employed in this embodiment is

configured in a manner such that a recessed portion is formed in the top outside 9003 of the inner case 900 described above, on the side closer to the projection lens in order to arrange the electro-optical device 925 and the cross dichroic prism 910 in the recessed portion. Therefore, with this inner case 901, the illuminating optical system 923, the color beam splitting optical system 924, and the relay optical system 927 are accommodated in [a] an enclosure comprising the inner case 901 and the lower case 4. The electro-optical device 925 and the cross dichroic prism 910 are placed outside the enclosure. The cross dichroic prism 910 to which the liquid crystal panels 925R, 925G, 925B are fixed is fixed to the inner portion of a head plate 9012 in a recessed portion 901A of the inner case 901. Furthermore, the connecting cables 925RC, 925GC, 925BC from their liquid crystal panels are extended from their edge sides opposite to the sides where the cross dichroic prism 910 is fixed to the inner case 901, and are connected to the driver board 11 that is arranged in parallel with the top outside 9013 of the inner case 901. Incidentally, an air vent through which air for cooling these liquid crystal panels passes can be formed around where the cross dichroic prism 910 is installed in the recessed portion 901A of the inner case 901, thereby making it possible to improve the cooling effect. Other configuration may be the same as in the case where the inner case 900 is employed.

Amend paragraph bridging pages 24 and 25 as follows:

Fig. 11 is a perspective view illustrating a light source lamp unit employed

for this embodiment. The light source lamp unit 8 is held by the housing 800 with a base 801 for holding the light source device 813 comprising the light source lamp 181 and the concave mirror [(see Fig. 8)] 182. As described above, the light source lamp unit 8 can be brought out of or into the inner case 900 or 901 disposed in the outer cases 2 through the bottom of the projector 1. The light source lamp unit 8 placed in the inner case 900 or 901 is fixed with a screw onto the lower case 4 using a screw hole 802 provided on the base 801. At this time, the bottom surface of the base 801 is exposed outside the lower case 4 and thus serves as a lid. Incidentally, the housing 800 for holding the light source lamp unit 8 is preferably formed of a resin to provide increased thermal insulation against the light source device 183.

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1. (Amended) A projector comprising:

an optical system including:

a light source that emits a light beam;

a color beam splitting optical system that splits [a] the light beam from the light source into [beams] sub-beams of predetermined colors;

electro-optical devices that [modulates] modulate the color [beams] sub-beams split by the color beam splitting optical system in accordance with image information;

a color beam combining optical system that combines the color [beams] sub-beams modulated by the electro-optical devices; and

a projection lens that projects a resultant beam combined by the color beam combining optical system;

an inner case to which optical components constituting the optical system are attached; said inner case being of box-shape with an opening;

vertically separable outer cases; and

an enclosure which is constituted by the inner case and [the] one of the outer cases; the opening of the inner case being [fixed to] blocked by said one of the outer cases so as to accommodate at least the color beam splitting optical system in the enclosure.

4. (Amended) The projector according to claim 1, wherein

a thermal insulation material is interposed between the inner case and

said one of the outer cases [case that accommodates the color beam splitting optical system].

8. (Amended) The projector according to claim 6, wherein
an air vent is provided [near a portion where] adjacent to the prism [is attached to the inner case].

9. (Amended) The projector according to claim 1, wherein
a mirror and a lens, constituting the optical system are fixed together by resilient clips [members].

10. (Amended) The projector according to claim 1, wherein
a cable electrically connects the electro-optical device to a driver board that controls the electro-optical device is led out from one side of the electro-optical device [on the nearer side] to the driver board.

11. (Amended) The projector according to claim [1] 10, wherein
the driver board that controls the electro-optical device is disposed on the top outside of the inner case.

13. (Amended) The projector according to claim [1] 10, wherein
the driver board that controls the electro-optical device is disposed [near] adjacent to the outer case [to which] where the inner case is fixed.

14. (Amended) The projector according to claim 1, wherein said one of the outer [case to which] cases is fixed to the inner case [is fixed has functions of] for positioning and supporting the optical components.

15. (Amended) The projector according to claim 1, wherein the inner case and said one of the outer [case] cases that [accommodates] accommodate the color beam splitting optical system are fixed with screws to each other.

16. (Amended) The projector according to claim 1, wherein part of a housing that holds the light source is placed on an outer surface of said one of the outer [case] cases, and [the housing] is [made] attachable to or detachable from said one of the outer cases [case by using the part of the housing].

17. (Amended) The projector according to claim 16, wherein [the] said housing that holds the light source is formed of a resin.

18. (Amended) The projector according to claim 1, [wherein] comprising an insulation coating film [is] applied to [a portion opposite to the light source in] the inner case in facing relation to said light source.